

CENTER FOR BEAM PHYSICS SPECIAL SEMINAR

“Analytical calculation of wakefields in accelerating / generating structures”

Alexei Smirnov (DULY Research Inc.)

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Abstract:

Long-range fields are considered for generic slow-wave structures in a time-domain; short-range monopole wakefields are analyzed including rectangular ("muffin-tin") structures. The role of group velocity and diffused propagation caused by dispersion is addressed for single bunch and multi-bunch beam. Field excitation/propagation below / above the cut-off is discussed as well. Extended diffraction models ("Lawson" and "Sessler-Vainshtein") are developed for planar structures and compared with available frequency-domain and time-domain data.

Biographical data:

1982: Graduated from Moscow Engineering Physics Institute (MEPhI), Dept. Electro-Physical Installations and Accelerators.

1986: Ph.D. in Phys. & Math. from the same Institute (MEPhI)

1985-1989: Engineer at "Kurchatov Institute" (Moscow), high-power multi-purpose rf-linac facility "Torch" ("Fakel").

1989-1997: Researcher/Scientist, Linac Lab. & Coherent Radiations Lab. at "Kurchatov Institute".

1997-2000: Senior Scientist at Kurchatov Source of Synchrotron Radiation (KSRS), Insertion Devices Lab.

2000-2002: Scientist, DULY Research Inc., CA